

9/03/13

Goals: Learn and use the terms congruent, midpoint, and bisect.

- Go over homework (Worksheet 1 - Segment Addition)
- Section 1.2 - Review Segment Addition
 - Congruency
 - Midpoints & Bisectors
- Worksheet for homework (Worksheet 2 - More Segment Addition)
- Quiz Thursday

Section 1.2
Targets D & E

Use of Segments and Congruence - Day 2

Segment Addition Postulate: *review*

If B is between A and C, then $AB + BC = AC$

Likewise, if $AB + BC = AC$, then we know that B is between A and C.

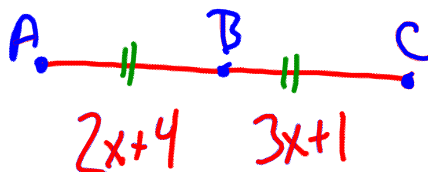


Congruency (congruent segments):

If line segments have the same length, they are called congruent segments.

	Lengths are equal.	Segments are congruent.
A B	$AB = CD$	$\overline{AB} \cong \overline{CD}$
	"IS EQUAL TO"	"IS CONGRUENT TO"
C D	A NUMBER	A FIGURE

If line segments are congruent, their lengths are equal so we can set them equal and solve.



$\overline{AB} \cong \overline{BC}$
FIND AB

$$\begin{array}{r}
 2x + 4 = 3x + 1 \\
 -2x \quad -2x \\
 \hline
 4 = x + 1 \\
 -1 \quad -1 \\
 \hline
 3 = x
 \end{array}$$

$$\begin{aligned}
 AB &= 2x + 4 \\
 &= 2(3) + 4 \\
 &= 6 + 4
 \end{aligned}$$

$$AB = 10$$

Section 1.2

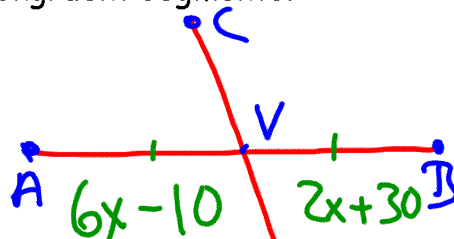
Use of Segments and Congruence - Day 2

Targets D & E

Midpoint - A point that divides a segment into two congruent segments.



Bisector - A point, line, line segment, ray, or plane that intersects a line segment at its midpoint dividing it into two congruent segments.



\overline{CD} BISECTS
 \overline{AB} AT V
FIND AV

$$\begin{array}{r} 6x - 10 = 2x + 30 \\ -2x \quad -2x \\ \hline 4x - 10 = 30 \\ +10 \quad +10 \\ \hline 4x = 40 \\ \frac{4x}{4} = \frac{40}{4} \end{array}$$

$$x = 10$$

$$\begin{aligned} AV &= 6x - 10 \\ AV &= 6(10) - 10 \\ &= 60 - 10 \\ AV &= 50 \end{aligned}$$

DISTANCE BETWEEN 2 POINTS



$$AB = |\Delta| = |x_2 - x_1|$$

FIND AB

$$8 = AB$$

$$|2 - -6|$$

$$|8| = 8$$